=> fil reg; d stat que l12; fil capl; d que nos l23; d que nos l24; d que nos l26;d que nos l39;d que nos l43
FILE 'REGISTRY' ENTERED AT 14:57:44 ON 13 AUG 2002
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STRUCTURE FILE UPDATES: 12 AUG 2002 HIGHEST RN 443729-39-3
DICTIONARY FILE UPDATES: 12 AUG 2002 HIGHEST RN 443729-39-3

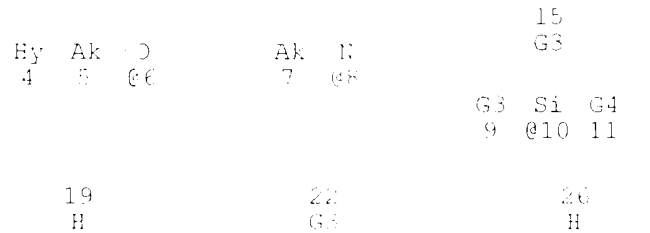
TSCA INFORMATION NOW CURRENT THROUGH MAY 29, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Calculated physical property data is now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

L8 STR



Ak = alkyl

Hy = heterocyclic

VAR G1=6/NH/X/8
VAR G2=10/17/21/25
VAR G3=12/14/X
VAR G4=18/X
REP G5=(1-4) CH2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGATAT IS LDS SAT AT 4
DEFAULT ELEVEL IS LIMITED
EXACT IS E1 C AT 1

EDGE ATTRIBUTES:

> Hy at node 4 is saturated, & has exactly one oxygen

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FILE 'CAPLUS' ENTERED AT 14:57:44 ON 13 AUG 2002
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FILE COVERS 1907 - 13 Aug 2002  VOL 137 ISS 7
FILE LAST UPDATED: 12 Aug 2002  (20020812/ED)
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This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

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L8                STR
L10               SCR 2026 AND 1006
L12          8068 SEA FILE=REGISTRY SSS FUL L8 AND L10
L13         11405 SEA FILE=CAPLUS ABB=ON  L12
L15          2317 SEA FILE=CAPLUS ABB=ON  SOLID SUPPORT#/OBI
L17          6566 SEA FILE=CAPLUS ABB=ON  MICROARRAY?/OBI OR MICRO(L)ARRAY?/OBI
L19            20 SEA FILE=CAPLUS ABB=ON  L13(L)L15
L20            17 SEA FILE=CAPLUS ABB=ON  L13(L)L17
L2?             4 SEA FILE=CAPLUS ABB=ON  (L19 AND L17) OR (L20 AND L15)
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[illegible]       [illegible] AND [illegible]
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[illegible]       SEA FILE=CAPLUS ABB=ON [illegible] L15
[illegible]    17 SEA FILE=CAPLUS ABB=ON L13(L)L17
[illegible]       SEA FILE=CAPLUS ABB=ON [illegible]
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-Section code 9 = Biochemical Abstracts

[illegible]

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L8                STR
L10               SCR 2026 AND 1006
L12           8068 SEA FILE=REGISTRY SSS FUL L8 AND L10
L13          21405 SEA FILE=CAPLUS ABB=ON  L12
L25            737 SEA FILE=CAPLUS ABB=ON  L13(L)ANST/RL
L27         249408 SEA FILE=CAPLUS ABB=ON  MODIF?/OBI
L31         195093 SEA FILE=CAPLUS ABB=ON  DNA+OLD/CT
L32         144871 SEA FILE=CAPLUS ABB=ON  RNA+OLD/CT
L33          9672 SEA FILE=CAPLUS ABB=ON  PEPTIDES/CT
L34          6247 SEA FILE=CAPLUS ABB=ON  POLYSACCHARIDES+OLD/CT
L35         121181 SEA FILE=CAPLUS ABB=ON  LIPIDS+OLD/CT
L36          13416 SEA FILE=CAPLUS ABB=ON  COVALENT?/OBI
L37            568 SEA FILE=CAPLUS ABB=ON  (L31 OR L32 OR L33 OR L34 OR L35) (L
               7 OR L36)
L38              9 SEA FILE=CAPLUS ABB=ON  L37 AND L25


L9                STR
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L13          21405 SEA FILE=CAPLUS ABB=ON  L12
L15           2317 SEA FILE=CAPLUS ABB=ON  SOLID SUPPORT#/OBI
L16          56610 SEA FILE=CAPLUS ABB=ON  IMMOBILI?/OBI
L17           6566 SEA FILE=CAPLUS ABB=ON  MICROARRAY?/OBI OR MICRO(L)ARRAY?/OBI
L18            541 SEA FILE=CAPLUS ABB=ON  L13(L)(L15 OR L16 OR L17)
L25            737 SEA FILE=CAPLUS ABB=ON  L13(L)ANST/RL
L39              1 SEA FILE=REGISTRY ABB=ON  CYTOSINE/CN
L40              1 SEA FILE=REGISTRY ABB=ON  GUANINE/CN
L41          10251 SEA FILE=CAPLUS ABB=ON  L39 OR CYTOSINE/OBI
L42          37497 SEA FILE=CAPLUS ABB=ON  L40 OR GUANINE/OBI
L43              8 SEA FILE=CAPLUS ABB=ON  (L18 OR L25) AND (L41 OR L42)


=> s l23 or l24 or l26 or l38 or l43
L45             41 L23 OR L24 OR L26 OR L38 OR L43

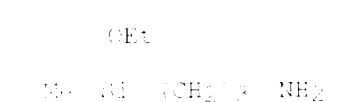
=> d ibib abs hitstr 14 1-41; fil hom

L4    ANSWER 1 OF 41    CAPLUS    COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:
DOCUMENT NUMBER:
TITLE:
INVENTOR(S):
PATENT ASSIGNEE(S):
SOURCE:
DOCUMENT TYPE:
```

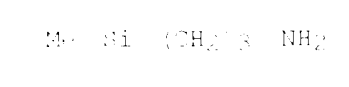
AB The present invention relates, in general, to a method of attaching a biopolymer to a solid support and, in particular, to a method of attaching a nucleic acid to a glass surface, and to reagents suitable for use in such a method. The invention further relates to the products produced by the present method and to kits comprising same. Clean microscope slides were silanized with N-(3-diethoxymethylsilylpropyl)bromoacetamide (prepn. given). Four oligonucleotides differing in only the nucleotide at their (free) 3'-ends were arrayed. When the array was treated with polymerase and fluorescein-ated terminator, specific labeling of only the primer with perfect complementarity to the template was obsd.

IT **3179-76-8**, (3-Aminopropyl)methyldiethoxysilane **18306-79-1**, 3-Aminopropyldimethylethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(method of attaching biopolymers to **solid supports** using bromoacetamidosilanes to functionalize supports)

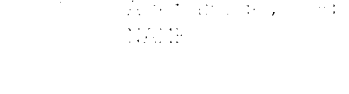
RN 3179-76-8 CAPLUS
CN 1-Propanamine, 3-(diethoxymethylsilyl)- (9CI) (CA INDEX NAME)



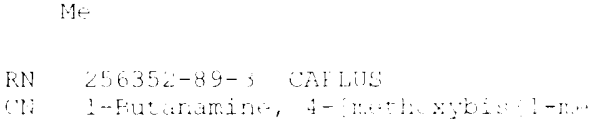
RN 18306-79-1 CAPLUS
CN 1-Propanamine, 3-(ethoxydimethylsilyl)- (9CI) (CA INDEX NAME)



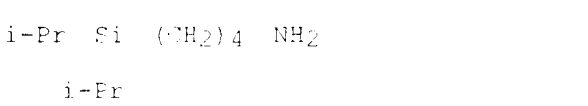
IT **256352-86-0P 256352-87-1P 256352-89-3P**
437610-24-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(method of attaching biopolymers to **solid supports** using bromoacetamidosilanes to functionalize supports)



RN 256352-89-3 CAPLUS
CN 1-Butanamine, 4-[methoxybis(1-methylethyl)silyl]- (9CI) (CA INDEX NAME)



RN 437610-24-7 CAPLUS
CN Acetamide, 2-bromo-N-[4-[methoxybis(1-methylethyl)silyl]butyl]- (9CI) (CA INDEX NAME)



L45 ANSWER 2 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:172444 CAPLUS
DOCUMENT NUMBER: 136:229021
TITLE: High-density functional slide for biomolecule immobilization and preparation method thereof for use in high-efficiency bio-chip microarray
INVENTOR(S): Ho, Chih-wei; Chow, Zu-sho; Jan, Bor-iuan; Tsao, Yia-huey; Pan, Chia-chi; Kuo, Wen-hsun; Chang, Yao-sung; Wu, Chen-tao; Lin, Yu-ching
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002009[illegible]	A1	[illegible]	US [illegible]	[illegible]

AB The invention [illegible]

form a polymeric soln.; (b) adding the monomer of allyl alc. and acrolein to the polymeric soln. under anaerobic conditions; and (c) adding ceric ammonium nitrate to the soln. for catalysis. The polyvinylalc.-based polyaldehyde graft copolymer comprises 2-1[illegible] (w/v) polyvinylalc., 2-1[illegible] vol./vol.) monomer of acrolein and 1-5 vol./vol.) monomer of allyl alc.

IT **919-30-2**, Aminopropyltriethoxysilane
RL: DEV (Device component use); USES (Uses)
(APTES, sol-gel; high-d. functional slide for biomol. immobilization and prepn. method thereof for high-efficiency bio-chip/ **microarray**)

RN 919-30-2 CAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

```
      OEt
      |
EtO - Si - (CH2)3 - NH2
      |
      OEt
```

L41 ANSWER 3 OF 41 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:90792 CAPLUS

DOCUMENT NUMBER: 136:275612

TITLE: Characteristics of DNA **microarrays** fabricated on various aminosilane layers

AUTHOR(S): Oh, Soon Jin; Cho, Sung Ju; Kim, Chang Ok; Park, Joon Won

CORPORATE SOURCE: Center for Integrated Molecular Systems, Department of Chemistry, Division of Molecular and Life Sciences, Pohang University of Science and Technology, Pohang, 790-784, S. Korea

SOURCE: Langmuir (2002), 18(5), 1764-1769
CODEN: LANGD5; ISSN: 0743-7463

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Four kinds of aminosilane layers on glass slides or silicon wafers were prepd. The amine densities of the layers prepd. with aminopropyldiethoxymethylsilane (APDES), aminopropylmonoethoxydimethylsilane (APMES), a mixt. of (aminopropyl)triethoxysilane (APTES) and [illegible] (n-PTMS) [illegible] AFM [illegible] APDES-, APMES-, and APTES/n-PTMS-treated surfaces were relatively flat; on the other hand, an aziridine-treated surface showed embossed morphol. The amine substrates were allowed to react with a heterobifunctional linker [illegible]imidyl 4-maleimido butyrate (SMB), and subsequently [illegible]

919-30-2 [illegible] 3179-76-8 18306-79-1
[illegible] ANST (Analytical study)

(DNA **microarrays** fabricated on various aminosilane layers)

RN 919-30-2 CAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

OEt

EtO Si $(CH_2)_3$ NH_2

OEt

RN 3179-76-8 CAPLUS

CN 1-Propanamine, 3-(diethoxymethylsilyl)- (9CI) (CA INDEX NAME)

OEt

Me Si $(CH_2)_3$ NH_2

OEt

RN 18306-79-1 CAPLUS

CN 1-Propanamine, 3-(ethoxydimethylsilyl)- (9CI) (CA INDEX NAME)

OEt

Me Si $(CH_2)_3$ NH_2

Me

REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 4 OF 41 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2002:51931 CAPLUS

DOCUMENT NUMBER: 136:30850

TITLE: Compositions and methods for array-based genomic [illegible]

INVENTOR(S): [illegible]

PATENT ASSIGNEE(S): [illegible]

SOURCE: [illegible]

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: [illegible]

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

[illegible]

group. The invention also provides arrays, or "biochips," comprising these modified biol. mols. Also provided are methods for making and using these compns.

IT 919-30-2, 3-Aminopropyltriethoxysilane 2530-83-8, 3-Glycidoxypropyltrimethoxysilane
RL: ANS (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(compns. and methods for array-based genomic nucleic acid anal. of biol. mols.)

RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

RN 2530-83-8 CAPLUS
CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)

L45 ANSWER 5 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:51489 CAPLUS
DOCUMENT NUMBER: 136:98799
TITLE: Improved combination of microporous membrane and solid support for micro-analytical diagnostic applications
PATENT ASSIGNEE(S): Cuno, Inc., USA
SOURCE: PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

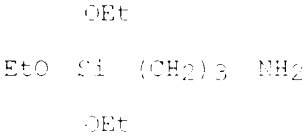
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO [illegible]	A2	[illegible]	WO [illegible]	[illegible]
WO [illegible]	A3	[illegible]		

DESIGNATED STATES: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
[illegible]

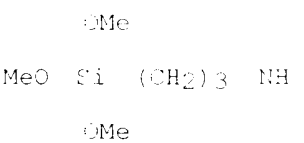
wherein the porous nylon multi-cell substrate is covalently bonded to a solid base member, such as, for example, a glass or Mylar microscope slide, such that the combination produced thereby is useful in microarray applications. App. for fabricating a multi-cell substrate is also disclosed. Diagrams describing the app. are given.

IT **919-30-2**, 3-Aminopropyltriethoxysilane **1760-24-3**, N-(2-Aminoethyl)-3-aminopropyltrimethoxysilane **2530-83-8**, 3-Glycidoxypropyltrimethoxysilane
RL: NUU (Other use, unclassified); USES (Uses)
(improved combination of microporous membrane and **solid support** for micro-anal. diagnostic applications)

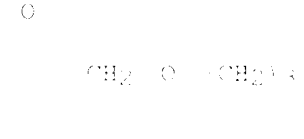
RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



RN 1760-24-3 CAPLUS
CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 2530-83-8 CAPLUS
CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)

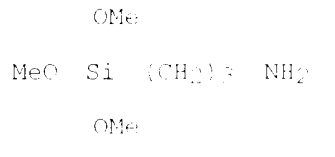


L4 ANSWER [illegible] OF [illegible] CAPLUS COPYRIGHT [illegible] ACS
ACCESSION NUMBER: [illegible]
DOCUMENT NUMBER: [illegible]
TITLE: [illegible] Binding Chemistry for Glass [illegible] Cyanine-Dye Labeled Microarrays
AUTHOR(S): [illegible], Paul B.; [illegible], Samuel L.; Mirkin, Chad A.; [illegible], Lyle E.; [illegible], Mark A.
CORPORATE SOURCE: [illegible]
SOURCE: [illegible]

are derivatized with various nucleophiles or electrophiles. In the latter case, a variety of surface chemistries have been developed, and several are available com. These chemistries must be compatible with manufacture-scale vols. of polynucleotide reagents, which contact the array over a small portion of their surface. We reasoned that a three-dimensional polymer coating could potentially offer greater surface contact and higher binding efficiency. Here we describe a polyethylenimine-based coating chem. that provides exceptional binding and hybridization characteristics. In our preferred process, size-fractionated polyethylenimine polymers are cross-linked onto an aminopropylsilanated glass surface in the presence of cyanuric chloride. The resulting three-dimensional coating binds polynucleotides through a mixt. of covalent and noncovalent interactions as evidenced by comparisons between 5'-aminoalkyl modified and unmodified polynucleotides. Binding and hybridization comparisons are presented including analogous two-dimensional electrophilic and electrostatic chemistries.

IT **13822-56-5**, 3-Aminopropyltrimethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(efficient binding chem. for glass polynucleotide **microarrays**, synthesis and characterization of glass surface coatings)

RN 13822-56-5 CAPLUS
CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)

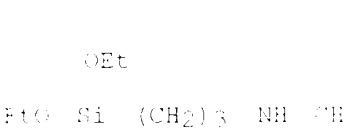


REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L47 ANSWER 7 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:362771 CAPLUS
DOCUMENT NUMBER: 136:163471
TITLE: HPLC of some nucleosides and bases on p-tert-butyl-calix[6]arene-bonded silica gel stationary phase
AUTHOR(S): Xiao, Yu-Xiu; Xiao, Xian-Chu; Feng, Yu-Qi; Wang, Zhong-Hua; Lu, Chi-Lu
CORPORATE SOURCE: [illegible]
SOURCE: [illegible]
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The [illegible] chromat. behavior of some nucleosides and bases was investigated on a new p-tert-butyl-calix[6]arene-bonded silica gel stationary phase. The [illegible]

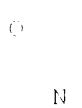
RL: ARU (Analytical role, unclassified); **ANST (Analytical study)**
(HPLC of nucleosides and bases on p-tert-butyl-calix[6]arene-bonded silica gel stationary phase)

RN 5089-72-5 CAPLUS
CN 1,2-Ethanediamine, N-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)

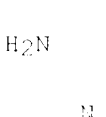


IT **71-30-7, Cytosine 73-40-5, Guanine**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(HPLC of nucleosides and bases on p-tert-butyl-calix[6]arene-bonded silica gel stationary phase)

RN 71-30-7 CAPLUS
CN 2(1H)-Pyrimidinone, 4-amino- (9CI) (CA INDEX NAME)



RN 73-40-5 CAPLUS
CN 6H-Purin-6-one, 2-amino-1,7-dihydro- (9CI) (CA INDEX NAME)



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L4 ANSWER ... OF ... CAPLUS ... ACCESSION NUMBER: ... DOCUMENT NUMBER: ... TITLE: ... INVENTOR(S): ... PATENT ASSIGNEE(S): ...

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WO 2001075166 A3 20020530
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
US 2002081597 A1 20020627 US 2001-823648 20010330
PRIORITY APPLN. INFO.: US 2000-193767P P 20000331
AB Compns. and methods for improving detection sensitivity in nucleic acid microarray anal. are disclosed, including methods of purifying nucleic acids, methods of synthesizing fluorescent DNA probes, methods of hybridization, and methods of activating a substrate for target mol. attachment. The compns. and methods of this invention include synthesis of cDNA, sDNA, or cRNA probes from cellular RNA by in vitro transcription and/or a single-round of reverse transcription with incorporation of fluorochromes. Specific procedures for microarray slide prepn. to decrease background fluorescence are given. For example, silanization of glass slides with toluene as the solvent is preferred. In addn., unmodified polynucleotides can attach to a glass slide treated with 3-aminopropyltriethoxysilane followed by phenylene diisothiocyanate. Modified target DNA can also be synthesized using PCR primers which contain a primary amine and an alkyl linker attached to the 5'-end. The modified target DNA is then reacted with activated silanized glass slides. Microarray hybridization buffers contg. alkylammonium salts, dimethylsulfoxide and formamide and lacking the detergent sodium dodecyl sulfate also improved the detection sensitivity. The invention is illustrated with microarrays hybridized with fluorescent probes synthesized from very small quantities of RNA isolated from microdissected tumor cells, paraffin-embedded liver and colon tissue, fresh frozen liver tissue, and fresh frozen colon tissue. The microarray expts. were designed to compare tissue sample prepn. methods and gene expression in tumor vs. healthy tissues. An example of the sensitivity of these methods shows a microarray hybridized with sDNA probes from one round of amplification of 2 pg of RNA from an ovarian carcinoma cell line.
IT **919-30-2**, 3-Aminopropyltriethoxysilane
RL: BPR (Biological use, unclassified); DEV (Device component use); ROT
microarrays

SOURCE: PCT Int. Appl., 2[illegible] pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001070641	A1	20010927	WO 2001-US8993	20010321
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6413722	B1	20020702	US 2000-532419	20000322
US 2002037509	A1	20020328	US 2001-775819	20010201
US 6387631	B2	20020514		

PRIORITY APPLN. INFO.: US 2000-532419 A 20000322
OTHER SOURCE(S): MARPAT 135:269660

AB Methods are provide for modifying a solid support, such as a glass slide, by silylating with an agent having the formula H2N(CH2)nSiX3 (n = 1-10, X = independently chosen from OMe, OEt, Cl, Br, I), then activating with a crosslinking reagent, followed by reacting with an amine-contg. polymer. The support can optionally be reacted with a crosslinking reagent again. The support thus modified may be used to make arrays and microarrays where a plurality of targets are stably assocd. with the support and arranged in a defined manner. Thus, glass slides were silylated with 3-aminopropyltrimethoxysilane. The silylated slides were reacted with cyanuric chloride then with PEI, polylysine, or polyhistidine. 3'-Aminoalkyl-terminated oligonucleotides were spotted on such slides and used in hybridization assays.

IT **13822-56-5**, 3-Aminopropyltrimethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymer coated surfaces for **microarray** applications)

RN 13822-56-5 CAPLUS
CN 1-Propanamine, 3-[illegible]-trimethoxysilyl- (9CI) (CA INDEX NAME)

[illegible]

REFERENCE COUNT: [illegible]

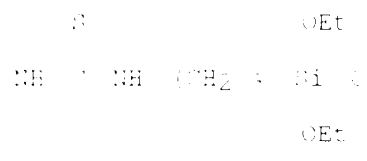
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The generation of chem. activated glass surfaces is of increasing interest for the prodn. of microarrays contg. DNA, proteins, and low-mol.-wt. components. We here report on a novel surface chem. for highly efficient activation of glass slides. Our method is based on the initial modification of glass with primary amino groups using a protocol, specifically optimized for high aminosilylation yields, and in particular, for homogeneous surface coverages. In a following step the surface amino groups are activated with a homobifunctional linker, such as disuccinimidylglutarate (DSG) or 1,4-phenylenediisothiocyanate (PDITC), and then allowed to react with a starburst dendrimer that contains 64 primary amino groups in its outer sphere. Subsequently, the dendritic monomers are activated and crosslinked with a homobifunctional spacer, either DSG or PDITC. This leads to the formation of a thin, chem. reactive polymer film, covalently affixed to the glass substrate, which can directly be used for the covalent attachment of amino-modified components, such as oligonucleotides. The resulting DNA microarrays were studied by means of nucleic acid hybridization expts. using fluorophorlabeled complementary oligonucleotide targets. The results indicate that the novel dendrimer-activated surfaces display a surface coverage with capture oligomers about twofold greater than that with conventional microarrays contg. linear chem. linkers. In addn., the expts. suggest that the hybridization occurs with decreased steric hindrance, likely a consequence of the long, flexible linker chain between the surface and the DNA oligomer. The surfaces were found to be resistant against repeated alk. regeneration procedures, which is likely a consequence of the crosslinked polymeric structure of the dendrimer film. The high stability allows multiple hybridization expts. without significant loss of signal intensity. The versatility of the dendrimer surfaces is also demonstrated by the covalent immobilization of streptavidin as a model protein.

IT **392661-75-5 392661-76-6**
RL: ARU (Analytical role, unclassified); DEV (Device component use); **ANST (Analytical study)**; USES (Uses)
(condensation on silica; dendrimer-activated **solid supports** for nucleic acid and protein **microarrays**)

RN 392661-75-5 CAPLUS

TI Pentanamide, 5-[(2,5-dioxo-1-pyrrolidinyl)oxy]-5-oxo-N-[3-(trihydroxysilyl)propyl]- (9CI) (CA INDEX NAME)



S C N

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 11 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:611699 CAPLUS
DOCUMENT NUMBER: 135:177672
TITLE: Linear microarrays
INVENTOR(S): Johann, Timothy W.; Park, Sang Chul
PATENT ASSIGNEE(S): Incyte Genomics, Inc., USA
SOURCE: U.S., 11 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6277628	B1	20010821	US 1998-165465	19981002
US 2002072065	A1	20020613	US 2001-933570	20010820

PRIORITY APPLN. INFO.: US 1998-165465 A1 19981002

AB The present invention provides a method and a compn. for detecting the levels of a plurality of biomol. probes in a sample. In particular, the invention relates to a hybridization compn. for detecting the presence or levels of different polynucleotide sequences in a sample. A YFG 50mer labeled at the 5'-end with a Cy3 fluorescent dye was immobilized on epoxide-coated glass beads. A capillary tube was packed with the beads sepd. by alternating unmodified beads to prep. a glass bead array.

IT **2530-83-8**, 3-Glycidoxypropyltrimethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(linear **microarrays**)

RN 2530-83-8 CAPLUS

CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The double helix is known to form as a result of hybridization of complementary nucleic acid strands in aq. soln. In the helix the neg. charged phosphate groups of each nucleic acid strand are distributed helically on the outside of the duplex and are available for interaction with cationic groups. Cation-coated glass surfaces are now widely used in biotechnol., esp. for covalent attachment of cDNAs and oligonucleotides as surface-bound probes on microarrays. These cationic surfaces can bind the nucleic acid backbone electrostatically through the phosphate moiety. Here we describe a simple method to fabricate DNA microarrays based upon adsorptive rather than covalent attachment of oligonucleotides to a pos. charged surface. We show that such adsorbed oligonucleotide probes form a densely packed monolayer, which retains capacity for base pair-specific hybridization with a soln. state DNA target strand to form the duplex. However, both strand dissocn. kinetics and the rate of DNase digestion suggest, on symmetry grounds, that the target DNA binds to such adsorbed oligonucleotides to form a highly asym. and unwound duplex. Thus, it is suggested that, at least on a charged surface, a non- helical DNA duplex can be the preferred structural isomer under std. biochem. conditions.

IT **13822-56-5**, 3-Aminopropyltrimethoxysilane
RL: ARU (Analytical reagent use); **ANST (Analytical study)**; USES (Uses)
(oligonucleotides form duplex with non-helical properties on pos. charged surface)

RN 13822-56-5 CAPLUS

CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)

```
      OMe
      |
MeO - Si - (CH2)3 - NH2
      |
      OMe
```

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

[illegible]

AUTHOR(S): [illegible]
Chen, Hong-Yuan

CORPORATE SOURCE: Department of Chemistry, State Key Laboratory of Coordination Chemistry, Nanjing University, Nanjing, [illegible]

SOURCE: Analytical Letters [illegible]
CODEN: ANALBP; ISSN: [illegible]

[illegible]

for six successive detns. at 1.times.10-6 mol/L soln. The detection limit is 2.times.10-7 mol/L.

IT **13822-56-5**, (3-Aminopropyl)trimethoxysilane
RL: ARU (Analytical role, unclassified); DEV (Device component use); **ANST (Analytical study)**; USES (Uses)
(DNA immobilization on nano-gold modified ITO for detn. of mifepristone)

RN 13822-56-5 CAPLUS
CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)

```
      OMe
      |
MeO — Si — (CH2)3 — NH2
      |
      OMe
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REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 14 OF 41 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:320387 CAPLUS
DOCUMENT NUMBER: 134:363619
TITLE: A factorial analysis of silanization conditions for the immobilization of oligonucleotides on glass surfaces
AUTHOR(S): Halliwell, Catherine M.; Cass, Anthony E. G.
CORPORATE SOURCE: Department of Biochemistry Imperial College of Science Technology and Medicine, University of London, London, SW7 2AY, UK
SOURCE: Analytical Chemistry (2001), 73(11), 2476-2483
CODEN: ANCHAM; ISSN: 0003-2700
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The modification of glass surfaces with (3-mercaptopropyl)trimethoxysilane and the application of this to DNA chip technol. are described. A range of factors influencing the silanization method, and hence the no. of surface-bound, chem. active thiol groups, were investigated using a design of expt. approach based on anal. of variance. The no. of thiol groups introduced on glass substrates were measured directly using a specific [illegible] [illegible] [illegible] [illegible] independent [illegible], and sample pretreatment. Depending [illegible] .times. [illegible] thiol groups [illegible] the glass samples were bound. The reliability and repeatability of liq.- and vacuum-phase silanization were also investigated. Eighteen-base oligonucleotide probes were covalently attached to the modified surfaces via a 5'-amino modification on the DNA and subsequent reaction with the crosslinking reagent N-(.gamma.-maleimidobutyryloxy)succinimide ester (GMBS). The resulting [illegible]

919-30-2, [illegible]
[illegible]
ANST (Analytical study) [illegible]

oligonucleotides on glass surfaces)
RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

```
      OEt
      |
EtO - Si - (CH2)3 - NH2
      |
      OEt
```

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 15 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:284303 CAPLUS
DOCUMENT NUMBER: 135:42876
TITLE: Peptide and small molecule **microarray** for high throughput cell adhesion and functional assays
AUTHOR(S): Falsey, James R.; Renil, M.; Park, Steven; Li, Shijun; Lam, Kit S.
CORPORATE SOURCE: UC Davis Cancer Center Division of Hematology/Oncology and Department of Internal Medicine, University of California Davis, Sacramento, CA, 95817, USA
SOURCE: Bioconjugate Chemistry (2001), 12(3), 346-353
CODEN: BCCHES; ISSN: 1043-1802
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel class of chem. microchips consisting of glass microscope slides was prepd. for the covalent attachment of small mol. ligands and peptides through site-specific oxime bond or thiazolidine ring ligation reaction. Com. available microscope slides were thoroughly cleaned and derivatized with (3-aminopropyl)triethoxysilane (APTES). The amino slides were then converted to glyoxylyl derivs. via two different routes: (1) coupling of Fmoc-Ser followed by deprotection and oxidn., or (2) coupling with protected glyoxylic acid and final deprotection with HCl. Biotin or peptide ligands derivatized at the carboxyl terminus with a 4,7,10-trioxa-1,13-tridecanediamine succinimic acid linker and an amino-oxy group or a 1,2-amino-thiol group (e.g., cysteine with a free N-alpha-amino group) were printed onto these slides using a DNA [illegible] ligands was analyzed with three different [illegible] assays: (1) [illegible] In the cell attachment assay, [illegible] det. the binding specificity of the peptide against different cell lines, we can also det. functional cell signaling of attached cells using immunofluorescence techniques in situ on the microchip. This chem. microchip system enables [illegible] the functional properties of numerous ligands that we have [illegible] library [illegible]

OEt

EtO Si $(CH_2)_3$ NH_2

OEt

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 16 OF 41 CAPLUS COPYRIGHT 2004 ACS
ACCESSION NUMBER: 2001:159116 CAPLUS
DOCUMENT NUMBER: 134:307437
TITLE: Controlled immobilization of DNA molecules using chemical modification of mica surfaces for atomic force microscopy: Characterization in air
AUTHOR(S): Umemura, Kazuo; Ishikawa, Mitsuru; Kuroda, Reiko
CORPORATE SOURCE: Joint Research Center for Atom Technology (JRCAT)-Angstrom Technology Partnership (ATP), Tsukuba, Ibaraki, 305-0046, Japan
SOURCE: Analytical Biochemistry (2001), 290(2), 232-237
CODEN: ANBCA2; ISSN: 0003-2697
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Immobilization of biomols. on surfaces while keeping the max. conformational flexibility of the mols. is one of the most important techniques for at. force microscopy imaging. We have developed two methods of controlling adsorption of DNA mols. on mica surfaces. The first method is the use of a mica surface modified with dild. 3-aminopropyltriethoxysilane (APS). Here we named this a "dild. APS-treated mica (AP-mica)" technique. The second method is the use of a mica surface modified with mixed self-assembled monolayers of organosilanes. In both of the techniques, the no. of DNA mols. immobilized on a mica surface was controlled. Further, a conformational change of circular DNA, from a supercoiled to a relaxed form was obsd. for the mols. immobilized on a dild. AP-mica surface, when 254-nm UV light was irradiated. This observation demonstrated that flexibility of circular DNA mols. was kept on a dild. AP-mica surface. (c) 2001 Academic Press.

IT **919-30-2**, 3-Aminopropyltriethoxysilane
RL: ARU (Analytical role, unclassified); DEV (Device component use); **ANST (Analytical study)**; [illegible]
[illegible]
RE [illegible]
CT [illegible]

OEt

EtO Si $(CH_2)_3$ NH_2

OEt

microarrays
INVENTOR(S): Ansorge, Wilhelm; Faulstich, Konrad
PATENT ASSIGNEE(S): Europaeisches Laboratorium Fuer Molekularbiologie (EMBL), Germany
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001014586	A1	20010301	WO 2000-EP8193	20000822
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 10016073	A1	20010301	DE 2000-10016073	20000331
EP 1212466	A1	20020612	EP 2000-962356	20000822
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				

PRIORITY APPLN. INFO.: DE 1999-19940077 A 19990824
DE 2000-10016073 A 20000331
WO 2000-EP8193 W 20000822

AB The invention relates to methods for covalent immobilization of biopolymers, esp. those of nucleic acids, on a solid phase. Covalent bonds are made between primary or/and secondary amino groups of said biopolymers and groups of the solid phase which react with said amino groups. Silica-based solid phases with defined functional groups are used for the immobilization of 5' amino-modified nucleotides; the prepd. DNA microarrays are used in amplification procedures.

IT **51895-58-0**
RL: DEV (Device component use); USES (Uses)
method for covalent immobilization and labeling of biopolymers esp. prepn. of nucleic acid **microarrays**

RE [illegible]

[illegible]

[illegible]

[illegible]

SOURCE: PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000079006	A1	20001228	WO 2000-US17022	20000616

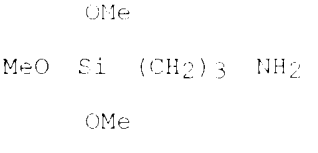
W: AU, CA, JP, NZ
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1999-138845P P 19990617

AB Arrays of HLA Class I oligonucleotide probes on a solid support are provided, wherein the probes are sufficient to represent at least 80% of the known polymorphisms in exons 2 and 3 of the HLA Class I locus.

IT **13822-56-5**, Aminopropyltrimethoxysilane
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); THU (Therapeutic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(**solid support** derivatized with; oligonucleotide arrays for high resoln. HLA typing and transplant compatibility anal.)

RN 13822-56-5 CAPLUS
CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 1[illegible] OF 41 [illegible] COPYRIGHT 2[illegible] ACS
ACCESSION NUMBER: [illegible]
DOCUMENT NUMBER: [illegible]
TITLE: [illegible]
AUTHOR(S): [illegible]
CORPORATE SOURCE: [illegible]
SOURCE: [illegible]
PUBLISHER: [illegible]
DOCUMENT TYPE: [illegible]
LANGUAGE: [illegible]
AB [illegible]

RL: ARU (Analytical role, unclassified); BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); **ANST (Analytical study)**; BIOL (Biological study); PROC (Process)
 (covalent attachment of DNA to glass supports using a new silane coupling agent and chemiluminescent detection)
RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

```
       OEt
       |
EtO - Si - (CH2)3 - NH2
       |
       OEt
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REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 41 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:670668 CAPLUS
DOCUMENT NUMBER: 134:159600
TITLE: Protein microarrays for monitoring of structural changes of proteins via surface enhanced metal nano cluster resonance
AUTHOR(S): Mayer, Christian; Palkovits, Roland; Bauer, Georg; Schalkhammer, Thomas
CORPORATE SOURCE: Kluyver L. for Biotechnology, TU-Delft, Delft, 2628BC, Neth.
SOURCE: Micro Total Analysis Systems 2000, Proceedings of the .mu.TAS Symposium, 4th, Enschede, Netherlands, May 14-18, 2000 (2000), 553-556. Editor(s): Van den Berg, Albert; Olthuis, W.; Bergveld, Piet. Kluwer Academic Publishers: Dordrecht, Neth.
CODEN: 69AJPP
DOCUMENT TYPE: Conference
LANGUAGE: English

AB Structural changes of ultra thin protein layers caused by changes in micro-environment, meaning a conformational change of the protein, were transformed into a optical signal obsd. directly as a color change of a [illegible]. We have successfully [illegible] [illegible] [illegible] [illegible] [illegible] The optical [illegible] [illegible] metal nano-cluster [illegible] proteins. The [illegible] array was measured [illegible] in the [illegible] and [illegible] of the spectrum. This set-up enabled us to transform a change of protein conformation of various serum proteins and enzymes into a [illegible], reversibly and directly visible to the human eye.

IT 3179-76-8
RL: [illegible] unclassified); [illegible]
 (protein **microarrays** [illegible])

OEt

Me Si $(CH_2)_3$ NH_2

OEt

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 21 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:384565 CAPLUS
DOCUMENT NUMBER: 133:25236
TITLE: Methods and compositions for performing an array of chemical reactions on a support surface
INVENTOR(S): Zebala, John A.
PATENT ASSIGNEE(S): Syntrix Biochip, Inc., USA
SOURCE: PCT Int. Appl., 157 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000033084	A2	20000608	WO 1999-US28021	19991123
WO 2000033084	A3	20000810		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

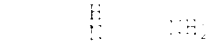
EP 1163374	A2	20011219	EP 1999-961613	19991123

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, R

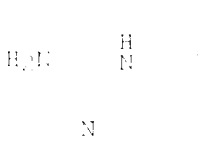
PRIORITY APPLN. INFO.: [illegible]

AB [illegible] ligands, that are within a variety of diagnostic and drug discovery assays. Ligand-arrays may comprise, for example, nuclease polymers that are resistant to degradative enzymes. DNA probes and analogs were synthesized [illegible] hybridization assays.

IT 71-30-7, Cytosine 73-40-5, Guanine



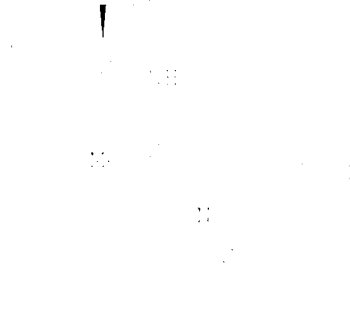
RN 7[illegible]-[illegible]-[illegible] CAPLUS
CN 6H-Purin-6-one, 2-amino-1,7-dihydro- (9CI) (CA INDEX NAME)



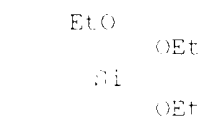
IT **273752-55-9DP, immobilized 273752-56-0DP, immobilized 273752-57-1DP, immobilized 273752-58-2DP, immobilized 273752-59-3DP, immobilized 273752-60-6DP, immobilized 273752-61-7DP, immobilized 273752-62-8DP, immobilized 273752-63-9DP, immobilized**
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(prepn. and detachment of; methods and compns. for performing arrays of chem. reactions on support surfaces using photoresists)
RN 273752-55-9 CAPLUS
CN L-Proline, N-[(1S)-1-carboxy-2-phenylethyl]-L-alanyl-, 2-[1,1-dimethyl-3-[4-[2-oxo-2-[[3-(triethoxysilyl)propyl]amino]ethoxy]phenyl]propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



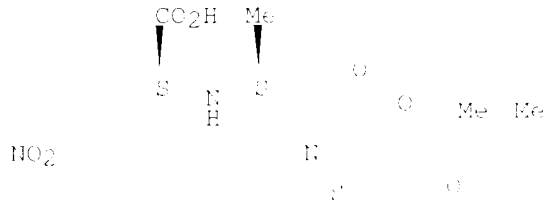
PAGE 1-B



RN 273752-56-0 CAPLUS
CN L-Proline, N-[(1S)-1-carboxy-2-(2-nitrophenyl)ethyl]-L-alanyl-, 2-[1,1-dimethyl-3-[4-[2-oxo-2-[[3-(triethoxysilyl)propyl]amino]ethoxy]phenyl]propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

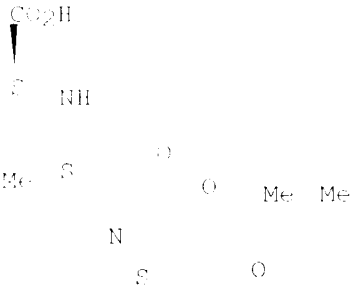


PAGE 1-B

(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

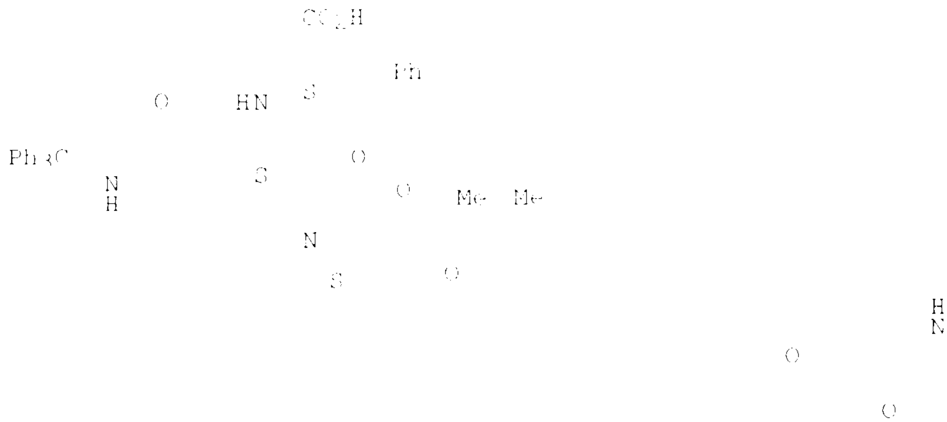


PAGE 1-B

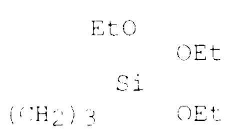
(CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

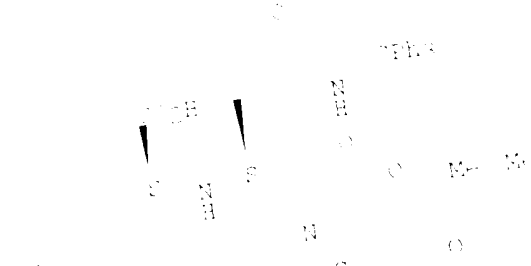


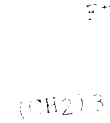
PAGE 1-B



RN 273752-59-3 CAPLUS
CN L-Proline, [illegible] (CA INDEX NAME)

[illegible]



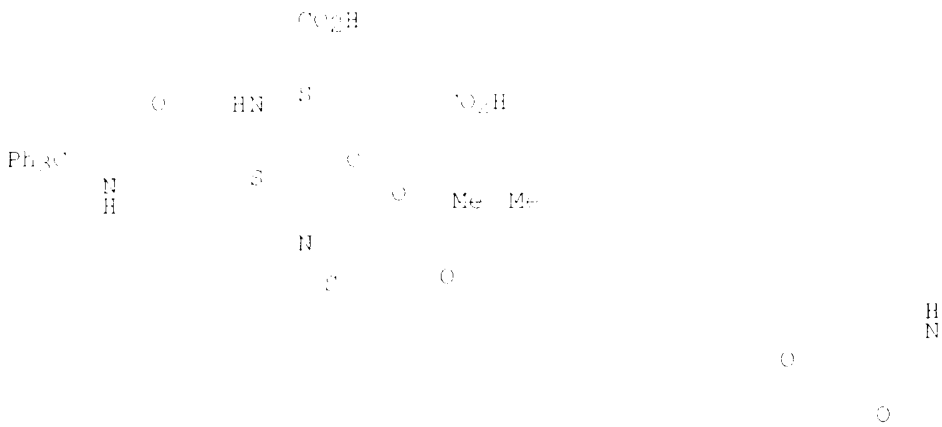


RN 273755-60-6 CAPLUS

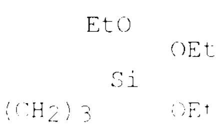
CN L-Asparagine, N2-[(1S)-1,3-dicarboxypropyl]-N-(triphenylmethyl)-L-asparaginyl-1-[3-(triethoxysilyl)propyl]amino]ethoxy]ph

(CA INDEX NAME)

PAGE 1-A



PAGE 1-B

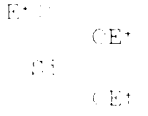


RN 273752-61-7 CAPLUS
CN L-Proline, N-[(1S)-1-[illegible]xy-2-phenylethyl]-3-(1,1-dimethylethyl)-[illegible] [illegible] (9CI) (CA INDEX NAME)

[illegible]

PAGE 1-A

PAGE 1-B

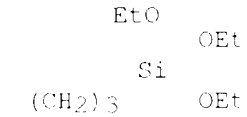


RN 27[illegible]-62-8 CAPLUS

CN [illegible]

PAGE 1-A

PAGE 1-B

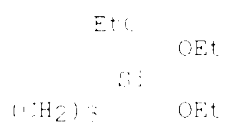


RN 273752-63-9 CAPLUS
CN L-Proline, N-[(1S)-1,3-dicarboxypropyl]-O-(1,1-dimethylethyl)-L-seryl-, 2-[1,1-dimethyl-3-[4-[2-oxo-2-[[3-(triethoxysilyl)propyl]amino]ethoxy]phenyl]propyl] ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

PAGE 1-B



L4? ANSWER 2? OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:54038 CAPLUS
DOCUMENT NUMBER: 132:90351
TITLE: Photoluminescent semiconductor materials
INVENTOR(S): Armstrong, David W.; Lafrance, Martine L.
PATENT ASSIGNEE(S): Iatroquest Corporation, Can.
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000003230	A1	20000120	WO 1999-CA642	19990709

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, [illegible]

[illegible]	A1	[illegible]	AU [illegible]	[illegible]
[illegible]	A1	[illegible]	EP [illegible]	[illegible]

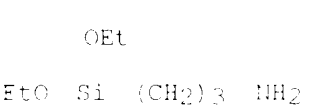
R: AT, BE, CH, DE, DK, ES, FR, GB, [illegible] IE, FI, CY

PRIORITY APPLN. INFO.: [illegible] 19??-[illegible] 1998[illegible]
W [illegible] 19??-[illegible] W 199[illegible]

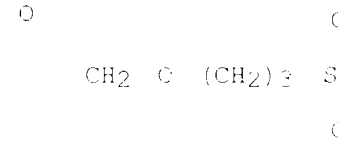
AB [illegible] materials having [illegible] porous texture are described which are [illegible] with [illegible] and [illegible] photoluminescent [illegible] magnetic radiation. The semiconductor material [illegible]

IT **919-30-2DP**, .gamma.-Aminopropyltriethoxysilane, reaction products with oxidized porous silicon and recognition moieties **2530-83-8DP**, 3-Glycidoxypropyltrimethoxysilane, reaction products with oxidized porous silicon and recognition moieties
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); **ANST (Analytical study)**; PREP (Preparation); USES (Uses)
(photoluminescent indicators based on surface-modified porous semiconductors)

RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



RN 2530-83-8 CAPLUS
CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 23 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:723221 CAPLUS
DOCUMENT NUMBER: 131:332971
TITLE: Chemically modified nucleic acids having enhanced lability towards **solid supports**, and uses thereof in high-density **microarrays**
INVENTOR(S): Bradley, Allan; Cai, Wei Wen
PATENT ASSIGNEE(S): Baylor College of Medicine, USA
SOURCE: PCT Int. Appl., [illegible]
CODEN: [illegible]
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: [illegible]
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO [illegible]	A1	[illegible]	WO [illegible]	[illegible]

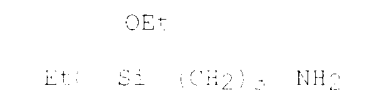
W: AE, AL, [illegible]
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, [illegible]

OTHER SOURCE(S): MARPAT 131:332971

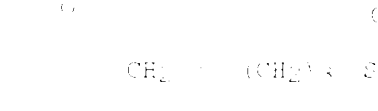
AB The invention relates to novel chem. modified nucleic acids with enhanced lability towards solid supports, such as glass. These modified nucleic acids can be readily affixed to solid supports, for instance, a glass surface, without first derivatizing the glass surface. In certain embodiments, the chem. modified nucleic acids of the invention are so modified via (1) compds. having a ring ether and an alkoxysilane group, (2) compds. having an amino group and an alkoxysilane group, (3) halogenated silanes, or (4) amine-contg. silanes reacted with brominated nucleic acids. High-d. microarrays based on these modified nucleic acids as well as methods for prepg. these microarrays are also useful.

IT **919-30-2DP**, 3-Aminopropyltriethoxysilane, bound to a nucleic acid
2530-83-8DP, 3-Glycidoxypropyltrimethoxysilane, bound to a nucleic acid
RL: AMG (Analytical reagent use); BPN (Biosynthetic preparation); **ANST (Analytical study)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(chem. modified nucleic acids having enhanced lability towards **solid supports**, and uses thereof in high d. **microarrays**)

RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

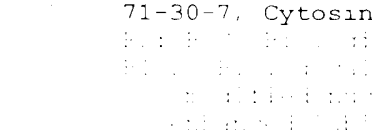


RN 2530-83-8 CAPLUS
CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)



IT 71-30-7, Cytosine
RL: [illegible]; [illegible]; [illegible]
(chem. modified nucleic acids having enhanced lability towards **solid supports**, and uses thereof in high d. **microarrays**)

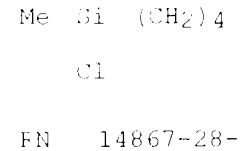
RN [illegible]
CN [illegible] 4-amino- (9CI) (CA INDEX NAME)



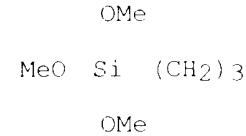
1591-21-5 14867-28-8, [illegible] 70892-80-7, [illegible] 82985-34-0, [illegible]

unclassified); **ANST (Analytical study)**; BIOL (Biological study);
USES (Uses)
(use in modifying nucleic acids; chem. modified nucleic acids having
enhanced lability towards **solid supports**, and uses
thereof in high-t. **microarrays**)

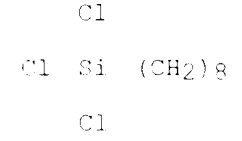
RN 1591-21-5 CAPLUS
CN Silane, dichloro(4-chlorobutyl)methyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 14867-28-8 CAPLUS
CN Silane, (3-iodopropyl)trimethoxy- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 70892-80-7 CAPLUS
CN Silane, (8-bromooctyl)trichloro- (9CI) (CA INDEX NAME)



RN 82985-54-6 CAPLUS
CN Silane, (8-bromooctyl)trimethoxy- (9CI) (CA INDEX NAME)

REFERENCE COUNT: THERE ARE [illegible] CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 41 USPAT on STN
ACCESSION NUMBER: [illegible]

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO [illegible] 1773	A1	19991014	WO 1999-US7203	19990331
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 23[illegible]63[illegible]	AA	19991014	CA 1999-2323638	19990331
AU 9934636	A1	19991025	AU 1999-34636	19990331
EP 1068356	A1	20010117	EP 1999-916233	19990331
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002510505	T2	20020409	JP 2000-542434	19990331
PRIORITY APPLN. INFO.:			US 1998-80686P	P 19980403
			WO 1999-US7203	W 19990331

AB Disclosed herein are arrays of nucleic acid-protein fusions which are immobilized to a solid surface through capture probes which include a non-nucleosidic spacer group and an oligonucleotide sequence to which the fusion (such as an RNA-protein fusion) is bound. RNA-protein fusions are synthesized by in vitro translation of mRNA pools contg. a peptide acceptor such as puromycin attached to their 3'-ends, such that a covalent amid bond forms between the 3'-end of the mRNA and the C-terminus of the protein which it encodes. The arrays are prepd. by fixing oligonucleotide sequences, the capture probes, to a support in a defined array; the capture probes are then used to bind nucleic acid-protein fusions through base pairing between the nucleic acid component of the fusion and a complementary capture probe. The result of the binding interactions between the fusions and the capture probes is a defined, addressable array of proteins attached to a solid support. Also disclosed herein are solid supports on which these arrays are immobilized as well as methods for their prepn. and use (for example, for screening for protein-compd. interactions such as protein-therapeutic compd. interactions). Exemplary fusion chips are generated for FLAG, HA11, and c-Myc epitope fusions.

IT 13822-56-5
[illegible]
solid supports [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

TITLE: Preparation and evaluation of p-tert-butylcalix[4]arene-bonded silica stationary phases for high-performance liquid chromatography

AUTHOR(S): Miao, Xiang-Zhu; Feng, Yu-Qi; Da, Shi-Lu; Zhang, Yan
CORPORATE SOURCE: Dep. Chemistry, Wuhan Univ., Wuhan, 430072, Peop. Rep. China

SOURCE: Chromatographia (1999), 49(11/12), 643-648
CODEN: CHRGB7; ISSN: 0009-5893
PUBLISHER: Friedrich Vieweg & Sohn Verlagsgesellschaft mbH
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A method is proposed for prepn. of a 4-tert-butylcalix[4]arene-bonded silica stationary phase. Chem. modified 4-tert-butylcalix[4]arene is attached to silica gel by using [.gamma.-(ethylenediamino)propyl]triethoxy silane as coupling reagent. The bonded phase was characterized by 29Si and 13C cross polarization/magic angle spinning solid-state NMR. The retention behavior of polycyclic arom. hydrocarbons (PAHs), nucleosides, and nucleobases was investigated on the bonded phase in the reversed-phase mode.

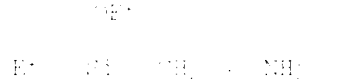
IT **71-30-7, Cytosine**
RL: ANT (Analyte); ANST (Analytical study)
(prepn. and evaluation of tert-butylcalixarene-bonded silica stationary phases for HPLC)

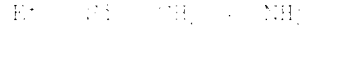
RN 71-30-7 CAPLUS
CN 2(1H)-Pyrimidinone, 4-amino- (9CI) (CA INDEX NAME)

IT **30858-91-4DP**, [.gamma.-(Ethylenediamino)propyl]triethoxysilane, reaction product with silica gel and tert-butyl[(chlorocarbonyl)methoxy]hydroxycalixarene
RL: ARU (Analytical role, unclassified); SPN (Synthetic preparation); **ANST (Analytical study)**; PREP (Preparation)
(prepn. and evaluation of tert-butylcalixarene-bonded silica stationary phases for HPLC)

RN [illegible]
CN [illegible]

AUTHOR AFFILIATION: Department of Microbiology, Arizona State University, Tempe, AZ, 85287-2701, USA
SOURCE: Biophysical Journal (1999), 77(1), 568-576
CODEN: BIOJAU; ISSN: 0006-3495
PUBLISHER: Biophysical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A procedure for covalent binding of DNA to a functionalized mica substrate is described. The approach is based on photochem. crosslinking of DNA to immobilized psoralen derivs. A tetrafluorophenyl (TFP) ester of tri-Me psoralen (trioxalen) was synthesized, and the procedure to immobilize it onto a functionalized aminopropyl mica surface (AP-mica) was developed. DNA mols. were cross-linked to trioxalen moieties by UV irradn. of complexes. The steps of the sample prepn. procedure were analyzed with XPS (XPS). Results from XPS show that an AP-mica surface can be formed by vapor phase deposition of silane and that this surface can be derivatized with trioxalen. The derivatized surface is capable of binding of DNA mols. such that, after UV crosslinking, they withstand a thorough rinsing with SDS. Observations with at. force microscopy showed that derivatized surfaces remain smooth, so DNA mols. are easily visualized. Linear and circular DNA mols. were photochem. immobilized on the surface. The mols. are distributed over the surface uniformly, indicating rather even modification of AP-mica with trioxalen. Generally, the shapes of supercoiled mols. electrostatically immobilized on AP-mica and those photo cross-linked on trioxalen-functionalized surfaces remain quite similar. This suggests that UV crosslinking does not induce formation of a noticeable no. of single-stranded breaks in DNA mols.
IT **919-30-2**
RL: ARU (Analytical role, unclassified); **ANST (Analytical study)**
(mica surface coated with,; imaging of DNA by at. force microscopy based on covalent photochem. crosslinking of DNA to trioxalen immobilized onto mica surface)
RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)





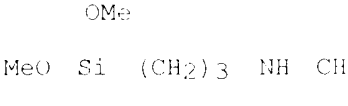
[illegible]

EP 895082 A3 19990811
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
JP 11187900 A [illegible] JP [illegible] [illegible]
JP 2001066305 A [illegible] JP [illegible] [illegible]
PRIORITY APPLN. INFO.: US 1997-207837 A 19970801
US 1997-947046 A 19971007
JP 1998-209423 A 19980724
OTHER SOURCE(S): MARPAT 131:144464

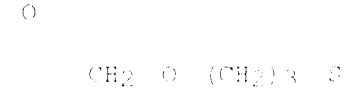
AB Provided is a method of attaching probes to a solid support in a markedly high d. and efficiency. An extremely small amt. of probe is contained within a liq., and droplets of the liq. are delivered to the solid support via an ink jet ejection method, thereby forming spots which contain the probe. Since one or more substances can bind specifically to target probes and said probes are arranged in a large no. on a solid support, the method can be used to swiftly and accurately det. a base sequence of a nucleic acid or detect a target nucleic acid in a sample.

IT **1760-24-3**, KBM603 **2530-83-8**, KBM403
RL: RCT (Reactant); RACT (Reactant or reagent)
novel methods of attaching probes to a **solid support** and uses thereof

RN 1760-24-3 CAPLUS
CN 1,2-Ethanediamine, N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX NAME)



RN 2530-83-8 CAPLUS
CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)



L4 ANSWER [illegible] OF [illegible] ACCESSION NUMBER: [illegible]
DOCUMENT NUMBER: [illegible]
TITLE: [illegible]
INVENTOR(S): [illegible]
PATENT ASSIGNEE(S): [illegible]
SOURCE: [illegible]
DOCUMENT TYPE: [illegible]
LANGUAGE: [illegible]

RU, KR, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9885825	A1	19990216	AU 1998-85825	19980721
AU [illegible]	B2	2001071[illegible]		
EP [illegible]	A1	200005[illegible]	EP 1998-[illegible]	19980721

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI

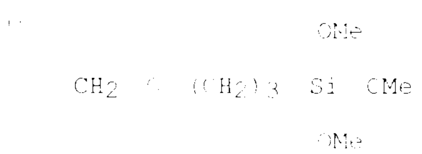
US [illegible]	A	200011[illegible]	US 1998-120386		19980721
JP [illegible]	T2	20010[illegible]	JP 2000-50[illegible]		19980721
PRIORITY APPLN. INFO.:			US 1997-53352P	P	19970722
			WO 1998-US15246	W	19980721

AB An array of biomols. is formed from a flat solid substrate, whereby said surface is covered with a layer of polyethylenimine (PEI) and this layer is divided among a plurality of discrete first regions abutted and surrounded by a contiguous second region. The process includes the step of depositing a biomol. into the first regions while maintaining the second region substantially free of the biomol.

IT **2530-83-8**, 3-(2,3-Epoxypropoxy)propyltrimethoxysilane
RL: ARU (Analytical role, unclassified); RCT (Reactant); **ANST (Analytical study)**; RACT (Reactant or reagent)
(use as bifunctional coupling agent; novel polyethylenimine-based biomol. arrays)

RN 2530-83-8 CAPLUS

CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER [illegible] OF 41 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1997:258651 CAPLUS
DOCUMENT NUMBER: 127:1[illegible]
TITLE: [illegible]
AUTHOR(S): [illegible]
CORPORATE SOURCE: [illegible] CH-[illegible], Switz.
SOURCE: Analytical Biochemistry [illegible]
CODEN: ANBCA2; ISSN: [illegible]
PUBLISHER: Academic
DOCUMENT TYPE: Journal
LANGUAGE: English

[illegible]

glass slides
RL: ARU (Analytical role, unclassified); DEV (Device component use); SPN (Synthetic preparation); **ANST (Analytical study)**; PREP (Preparation); USES (Uses)
(covalent attachment of hybridizable oligonucleotides to glass supports)

RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

```
      OEt
      |
EtO - Si - (CH2)3 - NH2
      |
      OEt
```

L45 ANSWER 30 OF 41 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:657014 CAPLUS
DOCUMENT NUMBER: 126:26153
TITLE: Carbazine dyes and derivatives for pH measurement
INVENTOR(S): Smith, Roger E.
PATENT ASSIGNEE(S): Utah Medical Products, Inc., USA
SOURCE: U.S., 23 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5567624	A	19961022	US 1995-429622	19950427
CA 2219117	AA	19961031	CA 1996-2219117	19960426
WO 9634284	A1	19961031	WO 1996-US5777	19960426

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, [illegible]

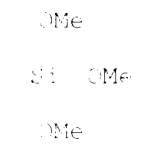
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
AU [illegible]	A	[illegible]	[illegible]	[illegible]
AU [illegible]	B	[illegible]		
EP [illegible]	A1	[illegible]	[illegible]	[illegible]
EP [illegible]	[illegible]	[illegible]		
JP [illegible]	[illegible]	[illegible]	JP [illegible]	[illegible]
JP [illegible]	[illegible]	[illegible]		

PRIORITY APPLN. INFO.: [illegible] A [illegible]
WO 1996-[illegible] W [illegible]

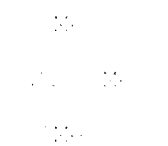
AB A compn. for detg. pH [illegible] comprises a fluorescent carbazine dye [illegible] A meth. [illegible] pH [illegible] [illegible]

2530-83-8
[illegible]
[illegible] solid
[illegible]

RN 2530-83-8 CAPLUS
CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 31 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:401921 CAPLUS
DOCUMENT NUMBER: 117:1921
TITLE: Oligonucleotide hybridizations on glass supports: a novel linker for oligonucleotide synthesis and hybridization properties of oligonucleotides synthesized in situ
AUTHOR(S): Maskos, Uwe; Southern, Edwin M.
CORPORATE SOURCE: Dep. Biochem., Univ. Oxford, Oxford, OX1 3QU, UK
SOURCE: Nucleic Acids Res. (1992), 20(7), 1679-84
CODEN: NARHAD; ISSN: 0305-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel linker for the synthesis of oligonucleotides on a glass support is described. Oligonucleotides synthesized on the support remain tethered to the support after ammonia treatment and are shown to take part in sequence-specific hybridization reactions. These hybridizations were carried out with oligonucleotides synthesized on ballotini solid sphere glass beads and microscope slides. The linker has a hexaethylene glycol spacer, bound to the glass via a glycidoxypropyl silane, terminating in a primary hydroxyl group that serves as starting point for automated or manual oligonucleotide synthesis.
IT 2530-83-8
RL: USES (Uses)
(glass support immobilization of, reaction with diols after, for synthesis of **solid support**-bound linker for oligonucleotide synthesis)
RN 2530-83-8 CAPLUS
CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)



L4 ANSWER [illegible] OF 41 CAPLUS COPYRIGHT [illegible] ACS
ACCESSION NUMBER: [illegible] CAPLUS
DOCUMENT NUMBER: [illegible]

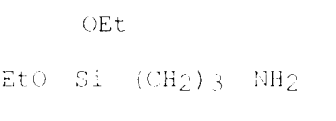
LANGUAGE: English

AB A new type of HPLC stationary phase contg. thymine deriv. was successfully prepd. It was found to give selective sepn. of nucleic acid bases and several purine derivs., such as caffeine and theophylline. The retention behavior and elution order of the solutes were interpreted in terms of mol. structure.

IT **919-30-2DP**, reaction products with silica gel and subsequently with thymine-ylpropionic acid-hydroxynorbornenedicarboximide reaction product
RL: SPN (Synthetic preparation); **ANST (Analytical study)**; PREP (Preparation)
(prepn. and use of, as stationary phase for sepn. of nucleic acid bases)

RN 919-30-2 CAPLUS

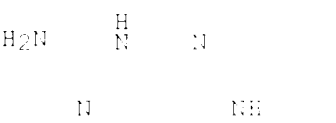
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IT **73-40-5, Guanine**
RL: ANST (Analytical study)
(sepn. of, from nucleic acid bases by HPLC on thymine bonded silica gel)

RN 73-40-5 CAPLUS

CN 6H-Purin-6-one, 2-amino-1,7-dihydro- (9CI) (CA INDEX NAME)



L4 ANSWER [illegible]

ACCESSION NUMBER:

DOCUMENT NUMBER:

TITLE:

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE:

LANGUAGE:

FAMILY ACC. NUM. COUNT:

JP 01072084	A2	19890316	JP 1988-141451		19880608
JP [illegible]	B4	19950726			
AT [illegible]	E	19970315	AT 1988-305217		19880608
US 5240602	A	19930831	US 1991-682393		19910402
US [illegible]	B1	20010626	US 1999-261450		19990303
PRIORITY APPLN. INFO.:			US 1987-58988	A	19870608
			US 1988-187765	A	19880429
			US 1990-485866	B1	19900223
			US 1991-682393	A3	19910402
			US 1993-70554	B1	19930601
			US 1995-397414	B1	19950301
			US 1996-714523	B1	19960916
			US 1997-949448	B1	19971014

AB Chromatog. materials (SBX, SBXYL, and SBXY' [S = substantially noncompressible solid support; B = binding group; X = substantially nonionic hydrophilic spacer; Y = coupling group; Y' = activated coupling group; L = affinity ligand] are provided. The solid support is silica gel or other metal oxide or ceramic. A process for chromatog. sepn. and detection of .gtoreq.1 substance with the title material is also provided. The chromatog. material is substantially free of nonspecific adsorption and is stable at high pH. PEG 600-propylsilica (40 .mu.m) was prepd. and activated with carbonyldiimidazole. The activated silica gel was reacted 1st with hydrazine, then with periodate-oxidized ovalbumin, and packed into a HPLC column. Serum from a rabbit immunized against ovalbumin was loaded onto the column. Following removal of nonbound serum components by washing, IgG was eluted with 2% HOAc contg. 0.15M NaCl. Identify of the eluted, purified IgG was confirmed by SDS-PAGE and Western blot anal.

IT **13883-39-1D**, reaction products with silica gel
RL: **ANST (Analytical study)**
(in prepn. of stationary phase for affinity chromatog., pH stability in relation to)

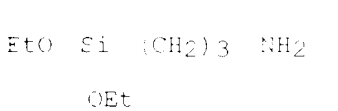
RN 13883-39-1 CAPLUS

CN Silane, (3-bromopropyl)trichloro- (6CI, 8CI, 9CI) (CA INDEX NAME)

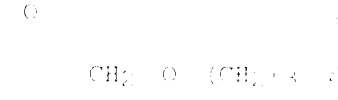
```
    Cl
    |
Cl—Si—(CH2)3—Br
    |
    Cl
```

L[illegible] ANSWER [illegible] CAPLUS COPYRIGHT [illegible]
ACCESSION NUMBER: [illegible]
DOCUMENT NUMBER: [illegible]
TITLE: [illegible] methacrylate-ethylene glycol dimethacrylate copolymers and their use as [illegible] supports for affinity chromatographic methods [illegible] in medicine and pharmaceutical industry
INVENTOR(S): [illegible]
PATENT ASSIGNEE(S): Akademie der Wissenschaften der DDR, [illegible]
[illegible]

DD 256720 A1 19880518 DD 1986-286583 19860129
OTHER SOURCE(S): MARPAT 110:208929
AB A process for the manuf. of chem. activated hydroxyethyl methacrylate-ethylene glycol dimethacrylate copolymer (I) in the form of shaped objects comprises the treatment of I with organosilanes (XR1m)nSiR4-n (X = amino, CO, CO2, isothiocyano, epoxy, diazo, NCO, NO, sulfhydryl, halocarbonyl; R1 = alkyl, alkylphenyl, Ph; R = alkoxy, phenoxy, halo; m = 0-20, n = 1-3) and optionally with hetero- or homofunctional reagents. Macroporous I (Separon Hema-1000; particle size 15-25 .mu.m; inner surface 70 m2 g; mol. wt. exclusion 2 .times. 10^7 g) was incubated with 1% aminopropyltriethoxysilane (NB 1114) in 1:1 EtOH-H2O at pH 2.5 for 6 h at 60.degree., washed with EtOH-H2O and 0.1M phosphate buffer at pH 6.8, and the resulting gel was incubated with 5% glutardialdehyde for 2 h at 49.degree. and subsequently washed with phosphate buffer. The activated gel was incubated with human IgG (15.6 mg IgG/mL 0.1M phosphate buffer) for 2 h at 37.degree. and overnight at 4.degree.; 36.7 mg IgG/g (>95%) were bound on activated I.
IT **919-30-2DP**, reaction products with Separon HEMA and glutaraldehyde
2602-34-8DP, reaction products with Separon HEMA and (aminopropyl)triethoxysilane and glutaraldehyde
RL: PREP (Preparation)
(manuf. of, as **solid support** for affinity chromatog.)
RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



RN 2602-34-8 CAPLUS
CN Silane, triethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)

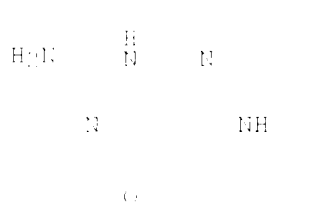


L47 ANSWER [illegible] OF [illegible] ACCESSION NUMBER: [illegible]
DOCUMENT NUMBER: [illegible]
TITLE: [illegible]
AUTHOR(S): [illegible]
[illegible]

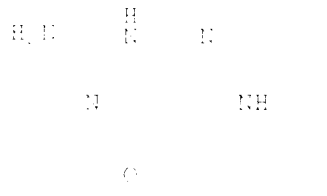
of these plates (for sugars, guanosine, and its phosphates) is not
inferior when compares with Merck com. plates NH2-F254. Ribonucleotides,
deoxyribonucleotides and impurities of nucleoside N bases and their
phosphates were sepd. by a mobile phase contg. AcOH and EtOH.

IT **73-40-5, Guanine 73-40-5D, Guanine,**
nucleotides
RL: ANST (Analytical study)
(sepn. of, by TLC, aminopropyltrimethoxysilane-modified silica gel for)

RN 73-40-5 CAPLUS
CN 6H-Purin-6-one, 2-amino-1,7-dihydro- (9CI) (CA INDEX NAME)

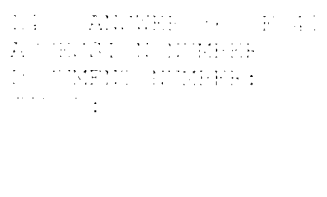


RN 73-40-5 CAPLUS
CN 6H-Purin-6-one, 2-amino-1,7-dihydro- (9CI) (CA INDEX NAME)



IT **919-30-2,** Aminopropyltriethoxysilane
RL: **ANST (Analytical study)**
(silica gel-modified with, for nucleic acid component sepn., by TLC)

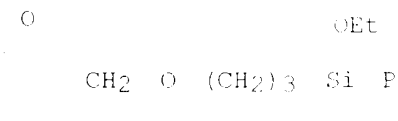
RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



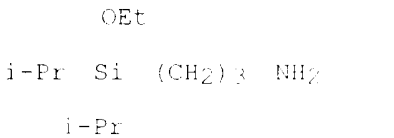
characterized by chromatog. and spectroscopic techniques. These new bonded phases are significantly more stable toward hydrolysis than previous bonded-phase silicas; retention and column efficiency are comparable. The first type uses bifunctional (or "bidentate") silanes contg. one reactive atom on each of two silicon atoms that connect through a bridging group such as -O- or -(CH2)n-. The second type uses a monofunctional silane with at least two bulky groups (e.g., isopropyl) on the silane silicon atom. These bulky groups provide steric protection to the Si-O-Si bond formed between the silane and the surface of the silica. The new bonded-phase silicas exhibit highly reproducible gradient elution high-performance seps. of peptides and proteins with low-pH mobile phases.

IT **116698-58-9DP**, reaction products with silica gels
117559-36-1DP, reaction products with silica gels
RL: **ANST (Analytical study)**; PREP (Preparation)
(prepn. and characterization and evaluation of, as stationary phases in HPLC for anal. with low-pH mobile phases)

RN 116698-58-9 CAPLUS
CN Silane, ethoxybis(1-methylethyl)[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)



RN 117559-36-1 CAPLUS
CN 1-Propanamine, 3-[ethoxybis(1-methylethyl)silyl]- (9CI) (CA INDEX NAME)



L4 ANSWER 4 OF 41 [illegible]
ACCESSION NUMBER: [illegible]
DOCUMENT NUMBER: [illegible]
TITLE: [illegible] solid support [illegible]
INVENTOR(S): [illegible]
PATENT ASSIGNEE(S): [illegible]
SOURCE: [illegible]
DOCUMENT TYPE: [illegible]
LANGUAGE: [illegible]

AT [illegible]	E	19920219	AT 1987-103692	19870314
ES [illegible]	T3	19930201	ES 1987-103692	19870314
JP [illegible]	A2	19871005	JP 1987-59117	19870316
JP [illegible]	B4	19921013		
DK [illegible]	A	19870919	DK 1987-1367	19870317

PRIORITY APPLN. INFO.: US 1986-841107 19860318
EP 1987-103692 19870314

AB CrO2 particles are modified to have desirable characteristics as solid supp. materials for immunoassays or for bioaffinity seprns. The particles are surface reduced and coated with protective silica and silane layers. Such treatment prevents hydrolytic degrdn. of the particles, and provides a functionalized coat. CrO2 particles were surface reduced in an aq. soln. of NaHSO3, then treated with NaAlO2 and Na2SiO3 soln. contg. Na borate, pH 8. The particles were coated with 3-aminopropyltriethoxysilane. The chromate leaching test of these particles gave an absorbance of 0.02 at 372 nm. The particle settling time was 8 min. In an immunoassay for the detn. of TSH, a serum sample was mixed with an enzyme-labeled anti-TSH .beta.-subunit monoclonal antibody (MAb), then mixed with a slurry of particles carrying anti-TSH .alpha.-subunit MAbs. The immune complexes formed were removed magnetically. The complexes were resuspended in a substrate soln. and incubated, the absorbance of the quenched soln. was read. Human serum contg. 0, 5, 25, and 50 .mu.IU TSH/mL gave an absorbance of 0.1138, 0.1829, 0.4845, and 0.7946, resp.

TI **919-30-2**, 3-Aminopropyltriethoxysilane **5089-72-5**
RL: **ANST (Analytical study)**
(surface-reduced magnetic chromium dioxide particles coated with silica and, for immunoassays and bioaffinity seprns.)

RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

RN [illegible] CAPLUS
CN 1,2-Ethanediamine, N-[3-(triethoxysilyl)propyl]- (9CI) (CA INDEX NAME)

IT [illegible]

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 240287	A1	19871111	EP 1987-810201	19870505
R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
WO 8706976	A1	19871119	WO 1987-EP234	19870507
W: AU, BR, DK, FI, JP, NO, US				
AU 8775889	A1	19871201	AU 1987-75889	19870507
JP 01500121	T2	19890126	JP 1987-503871	19870507
FI 8705770	A	19871230	FI 1987-5770	19871230
NO 8800019	A	19880210	NO 1988-19	19880104
DK 8800086	A	19880217	DK 1988-86	19880104

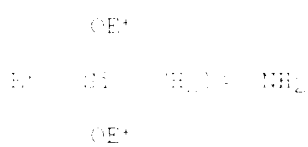
PRIORITY APPLN. INFO.: EP 1986-810201 19860505
WO 1987-EP234 19870507

AB A waveguide coated with single-stranded probe nucleic acids and carrying an internally reflected wave signal is contacted with an analyte soln. contg. denatured test DNA or RNA and fluorescent marker dye. Analyte nucleic acid with sequences homologous to that of the probe polynucleotide will hybridize therewith with concomitant binding of the fluorescent dye to the resultant duplex structures. Fluorescence resulting from the interaction of the wave signal at the waveguide/analyte interface with the signal generating centers created within the space probed by the evanescent component of the wave signal is detected and provides useful information on said sequences homologous to that of the probe nucleic acids. A plate waveguide with poly(dA) affixed (prepn. described for oligo dC on aminopropyl glass plate) was affixed into a flow cell and a base-line signal was obtained with buffer in the cell. Both ethidium bromide and poly-dT were mixed and injected into the flow cell and the reaction was monitored. In a control, only ethidium bromide was added. The monitoring reaction was effectively immediate and only specific intercalation between double-stranded DNA was detected.

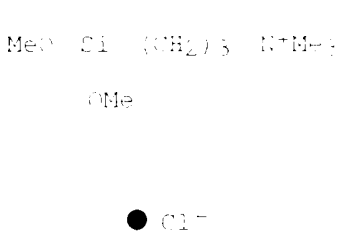
IT **919-30-2**, 3-Aminopropyltriethoxysilane
RL: **ANST (Analytical study)**
(grafting of, on waveguide, for nucleic acid attachment, nucleic acid detn. in relation to)

RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)

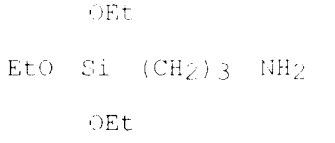
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Macroporous glass treated with .gamma.-aminopropyltriethyoxysilane and then with 1:1 copolymer of N-vinylpyrrolidone and acryloyl chloride was prepd. and used for sepn. of influenza, Sendai, etc. viruses. The sorbent possesses low absorption activity but had higher stability and better hydrodynamic properties than commonly used sorbents (Sepharose 4B, porous glass). The sorbent can be used repeatedly without regeneration (>30 times) and could be regenerated by washing with 1:1 iso-PrOH-H_2O, when the chromatog. properties are totally restored. The inert sorbent was also used for the sepn. of Escherichia coli tRNA from 70 S ribosomes.
IT 919-30-2, .gamma.-Aminopropyltriethoxysilane
RL: ANST (Analytical study)
(glass treatment with, copolymer modification after, for gel chromatog. support prepn.)
RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



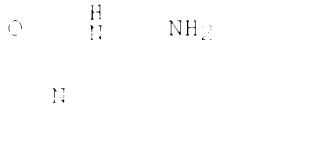
L4 ANSWER 40 OF 41 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1988:31015 CAPLUS
DOCUMENT NUMBER: 108:31015
TITLE: Alkoxy silanes for the preparation of silica based stationary phases with bonded polar functional groups
AUTHOR(S): Engelhardt, Heinz; Orth, Peter
CORPORATE SOURCE: Angew. Phys. Chem., Univ. Saarlandes, Saarbruecken, Fed. Rep. Ger.
SOURCE: J. Liq. Chromatogr. [illegible]
CODEN: JLCHD8; ISSN: [illegible]
DOCUMENT TYPE: Journal
LANGUAGE: English
AB For prepn. of polar bonded phases with alkoxysilanes, an activator and a catalyst are required to achieve surface coverages comparable to those obtained with chlorosilanes. For activation a monolayer of H_2O on the [illegible]
IT 35141-36-7D, reaction products with silica
RL: [illegible]; ANST (Analytical study)
[illegible]
[illegible]
[illegible]



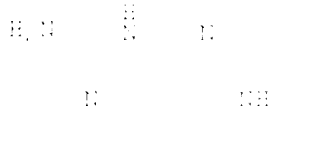
IT **919-30-2D**, 3-Aminopropyltriethoxysilane, reaction products with silica
RL: ARU (Analytical role, unclassified); **ANST (Analytical study)**
(as stationary phases, for liq. chromatog.)
RN 919-30-2 CAPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (9CI) (CA INDEX NAME)



IT **71-30-7, Cytosine 73-40-5, Guanine**
RL: ANT (Analyte); ANST (Analytical study)
(sepn. of, from nucleobases, chem.-bonded silica stationary phases for cation-exchange liq. chromatog.)
RN 71-30-7 CAPLUS
CN 2(1H)-Pyrimidinone, 4-amino- (9CI) (CA INDEX NAME)



IT [illegible]
RN [illegible]
CN [illegible]

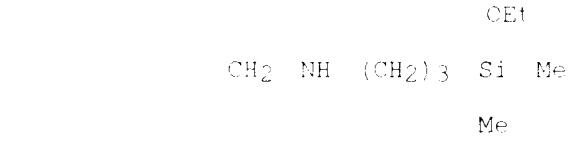


AUTHOR(S): E. M. Gross Chem. Lab., Duke Univ., Durham, NC, 27706, USA

SOURCE: ACS Symp. Ser. (1986), 297(Chromatogr. Sep. Chem.), 210-25
CODEN: ACSMC8; ISSN: 0097-6156
DOCUMENT TYPE: Journal
LANGUAGE: English

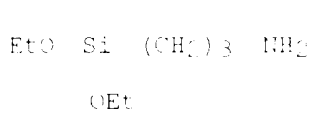
AB The use of boronic acid-substituted, amine-modified silica gel stationary phases for the HPLC sepn. of saccharides and nucleosides under neutral conditions was studied. Five stationary phases were prepd. using Partisil 10. The capacity factors for selected saccharides and nucleosides on columns packed with these stationary phases are given. The presence of residual amine groups in the surface bound, silica-based phenylboronic acid phases lowers the apparent pKa of the acid groups. This surface buffering effect permits boronate-saccharide complexation to occur at much lower pH values than is typically the case.

IT **102712-18-5D**, reaction products with silica gel
RL: **ANST (Analytical study)**
(as stationary phases for high-performance liq. chromatog. sepn. of nucleosides and saccharides)
RN 102712-18-5 CAPLUS
CN Boronic acid, [4-[[[3-(ethoxydimethylsilyl)propyl]amino]methyl]phenyl]- (9CI) (CA INDEX NAME)

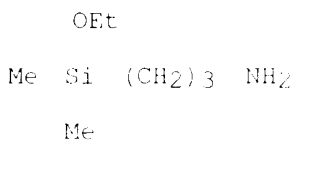


IT **73-40-5**
RL: ANT (Analyte); ANST (Analytical study)
(high-performance liq. chromatog. of, on boronic acid-substituted amine-modified silica gel stationary phases)
RN 73-40-5 CAPLUS
CN 9H-Purin-6-one, 2-amino-1,7-dihydro- (9CI) (CA INDEX NAME)

919-30-2 18306-79-1
ANST (Analytical study)



RN 18306-79-1 CAPLUS
CN 1-Propanamine, 3-(ethoxydimethylsilyl)- (9CI) (CA INDEX NAME)



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